Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of the claims in the application:

1. (Currently Amended) A method for detecting overlay errors, the method comprising directing a primary electron beam to interact with an inspected object, said directing comprising propagating the primary electron beam along an optical axis, diverting the primary electrical beam to propagate along a secondary optical axis that is parallel to but spaced apart from the optical axis, and subsequently diverting the primary electron beam so as to again propagate along the optical axis; the inspected object having a first feature formed on a first layer of the inspected object, a second feature formed on a second layer of the inspected object, and an intermediate layer positioned between the first and second layers, wherein the second feature is buried under the first layer and affects a shape of an area of the first layer, but the first feature and second feature are not overlapping; detecting electrons reflected or scattered from the area of the first layer; ~~and~~ receiving detection signals from ~~at least one detector~~ a first in-lens detector and a second in-lens detector, the second in-lens detector positioned to detect electrons that pass through an aperture in the first in-lens detector; and determining overlay errors according to the detection signals.

2. (Previously Presented) The method of claim 1 wherein at least some of the directed electrons are reflected or scattered at small angle in relation to the inspected object.

3. (Currently Amended) The method of claim 1 wherein the step of directing further comprises directing electrons of the primary electron beam to interact with the second feature.

4. (Previously Presented) The method of claim 3 wherein the step of detecting comprises detecting electrons reflected or scattered from the second feature.

5. (Original) The method of claim 1 further comprising a preliminary step of charging the second feature.

6. (Currently Amended) A method for detecting overlay errors, comprising directing a primary electron beam to interact with a first feature and a second feature of an inspected object, said directing comprising propagating the primary electron beam along an optical axis, diverting the primary electrical beam to propagate along a secondary optical axis that is parallel to but

spaced apart from the optical axis, and subsequently diverting the primary electron beam so as to again propagate along the optical axis, wherein an intermediate layer is positioned between the first and second layers and wherein the first feature is formed on a first layer of the inspected object and the second feature formed on a second layer of the object, the second feature is buried under the first layer, but the first feature and second feature are not overlapping; detecting electrons reflected or scattered from the first and second features; ~~and~~ receiving detection signals from ~~at least one detector~~ a first in-lens detector and a second in-lens detector, the second in-lens detector positioned to detect electrons that pass through an aperture in the first in-lens detector; and determining overlay errors.

7. (Original) The method of claim 6 wherein at least some of the detected electrons are reflected or scattered at small angle in relation to the inspected object.

8. (Original) The method of claim 6 wherein the second feature affects a shape of an area of the first layer.

9. (Previously Presented) The method of claim 8 wherein detecting comprises detecting electrons reflected or scattered from the area of the first layer.

10. (Original) The method of claim 6 further comprising a preliminary step of charging the second feature.

11. (Currently Amended) A system for overlay error measurements, comprising: means for directing a primary electron beam to interact with an inspected object by propagating the primary electron beam along an optical axis, diverting the primary electrical beam to propagate along a secondary optical axis that is parallel to but spaced apart from the optical axis, and subsequently diverting the primary electron beam so as to again propagate along the optical axis, the inspected object having a first feature formed on a first layer of the inspected object, a second feature formed on a second layer of the inspected object, and an intermediate layer positioned between the first and second layers, wherein the second feature is buried under the first layer, but the first feature and second feature are not overlapping; ~~at least one detector~~ a first in-lens detector and a second in-lens detector, the second in-lens detector positioned to detect electrons that pass through an aperture in the first in-lens detector, the first and second in-lens detectors for detecting electrons reflected or scattered from the inspected object, wherein at least some of the

directed electrons are reflected or scattered at small angle in relation to the inspected object; and a processor, coupled to the ~~at least one detector~~ first and second in-lens detectors, for receiving detection signals from the ~~at least one detector~~ first and second in-lens detectors and determining overlay errors.

12. (Currently Amended) The system of claim 11 wherein the ~~at least one detector is~~ first and second in-lens detectors are positioned to detect electrons that are reflected or scattered at small angle in relation to the inspected object.

13. (Original) The system of claim 11 wherein the means for directing are capable of directing electrons to interact with the second feature.

14. (Currently Amended) The method of claim 13 wherein ~~the~~ at least one of the first and second in-lens detectors ~~detector~~ is positioned to detect electrons reflected or scattered from the second feature.

15. (Currently Amended) A system for detecting overlay errors, the system comprises: means for directing a primary electron beam to interact with a first feature and a second feature of an inspected object by propagating the primary electron beam along an optical axis, diverting the primary electrical beam to propagate along a secondary optical axis that is parallel to but spaced apart from the optical axis, and subsequently diverting the primary electron beam so as to again propagate along the optical axis, the first feature formed on a first layer of the inspected object, the second feature formed on a second layer of the inspected object, and an intermediate layer positioned between the first and second layers, wherein the second feature is buried under the first layer, but the first feature and second feature are not overlapping; ~~at least one detector~~ a first in-lens detector and a second in-lens detector, the second in-lens detector positioned to detect electrons that pass through an aperture in the first in-lens detector, the first and second in-lens detectors for detecting electrons reflected or scattered from the first and second features; and a processor, coupled to the ~~at least one detector~~ first and second in-lens detectors, for receiving detection signals from the ~~at least one detector~~ first and second in-lens detectors and determining overlay errors.

16. (Currently Amended) The system of claim 15 wherein the ~~at least one detector is~~ first and second in-lens detectors are positioned to detect electrons reflected or scattered at small angle in relation to the inspected object.

17. (Original) The system of claim 15 wherein the second feature affects a shape of an area of the first layer.

18. (Currently Amended) The system of claim 17 wherein ~~the~~ at least one of the first and second in-lens detectors ~~detector~~ is positioned to detect electrons reflected or scattered from the area of the first layer.